

1/21

FIGURES

FIG. 1

pTV2 gDsE2

pTV2 gDsE2t

pTV2 ST

pTV2 ΔST

pTV2 SN2

pTV2 ΔSN2

pTV2 gDsST

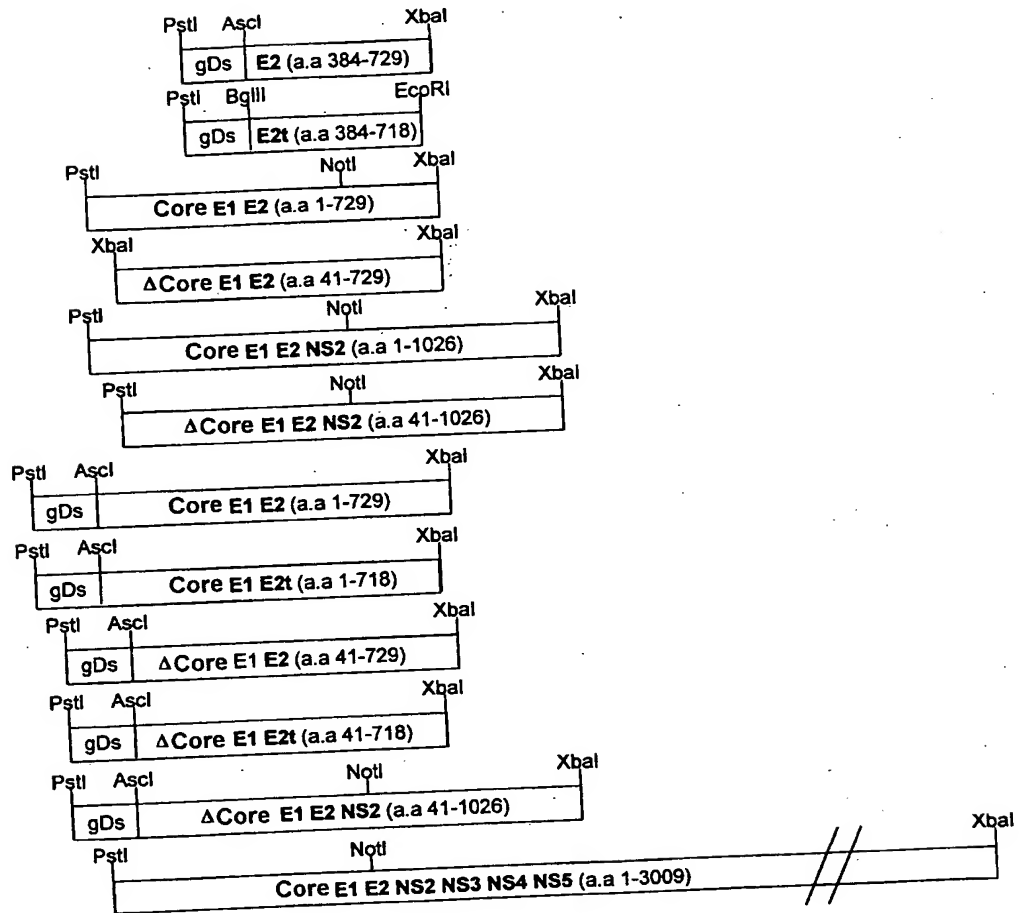
pTV2 gDsSTt

pTV2 gDsΔST

pTV2 gDsΔSTt

pTV2 gDsΔSN2

pTV2 SN5

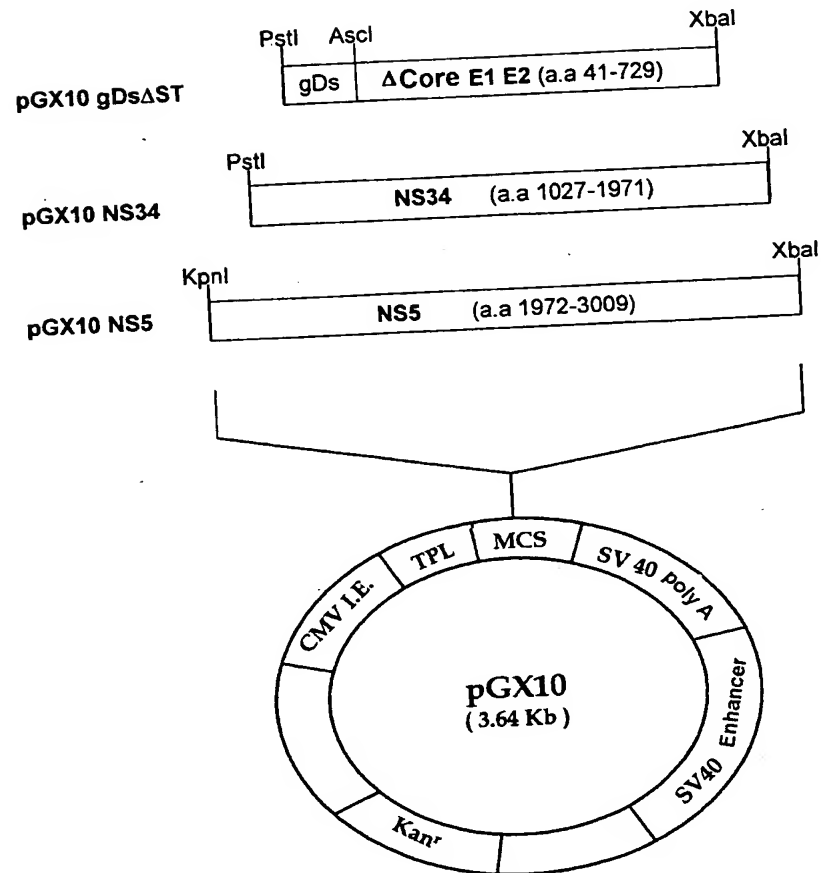


BEST AVAILABLE COPY

2/21

FIG. 2

HC102

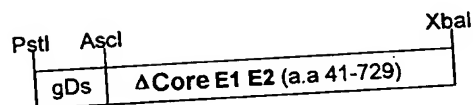


3/21

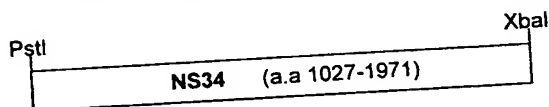
FIG. 3

HC103

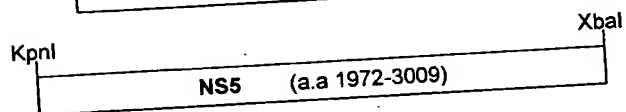
pGX10 gDs Δ ST



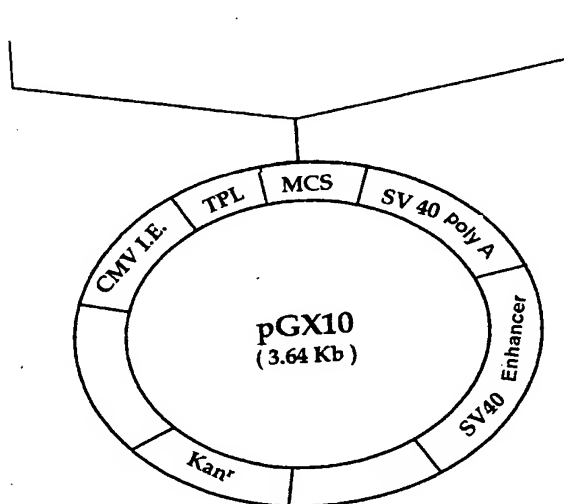
pGX10 NS34



pGX10 NS5

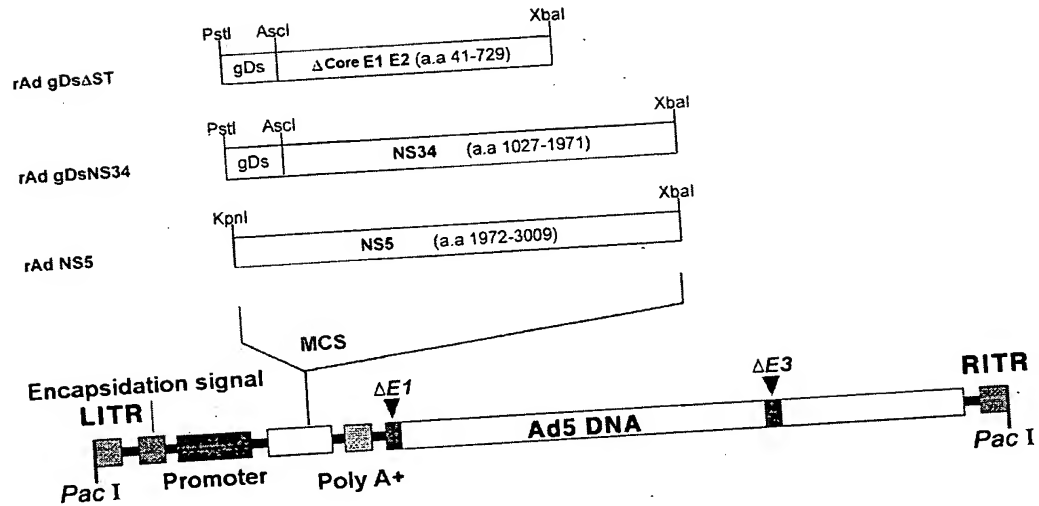


pGX10 hIL-12^m



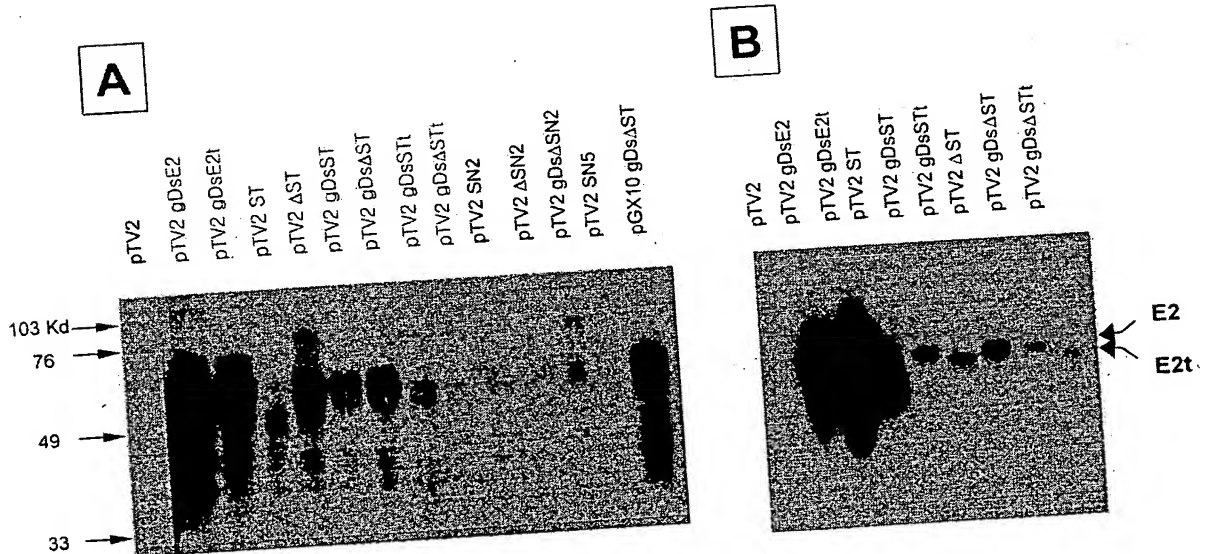
4/21

FIG. 4



rAd HC102

FIG. 5



5/21
FIG. 6

COS-7

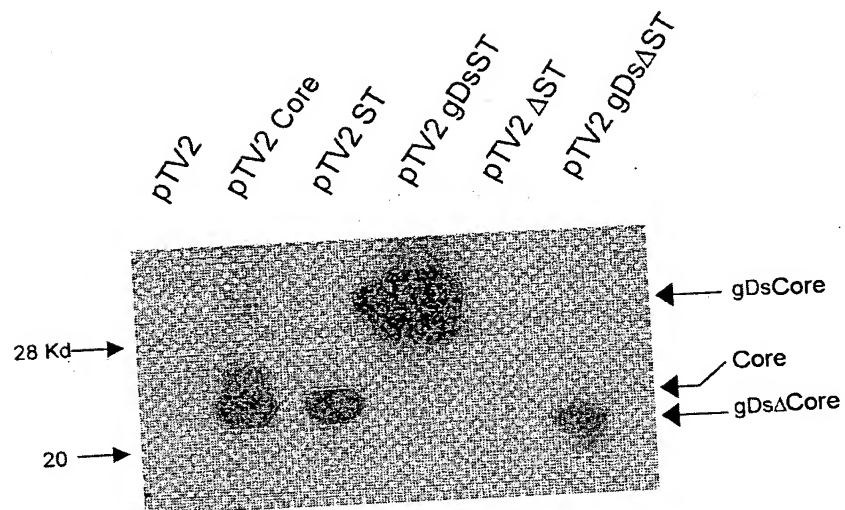
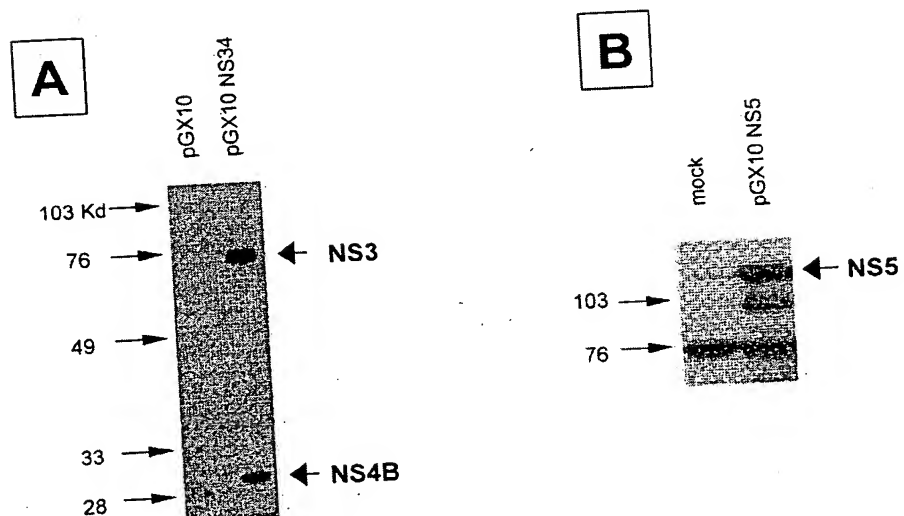


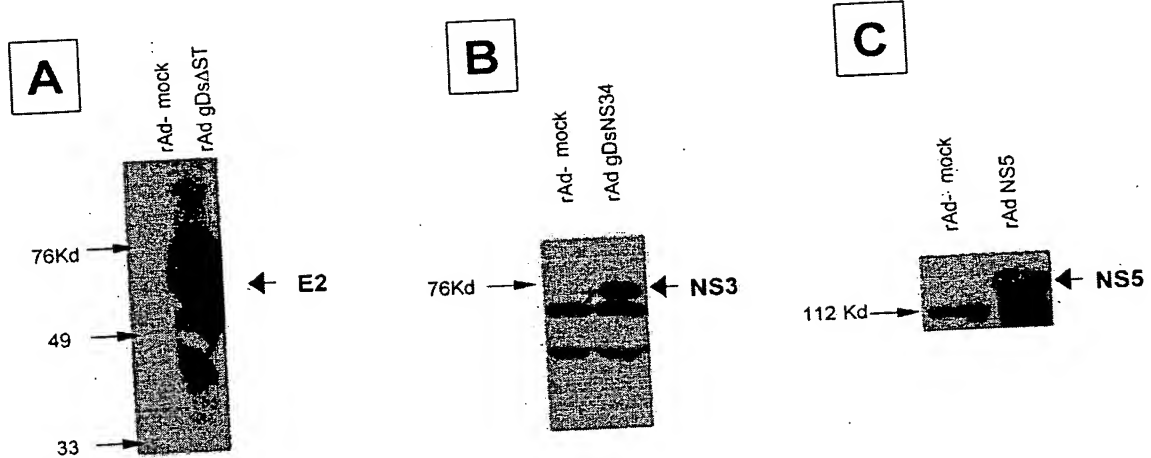
FIG. 7

COS-7



6/21
FIG. 8

293A



7/21

FIG. 9

Optimization of insert size

(5 weeks after immunization)

E2 specific IFN- γ ELISPOT & CTL response
target cell : 2×10^4 CT26-hghE2t/well

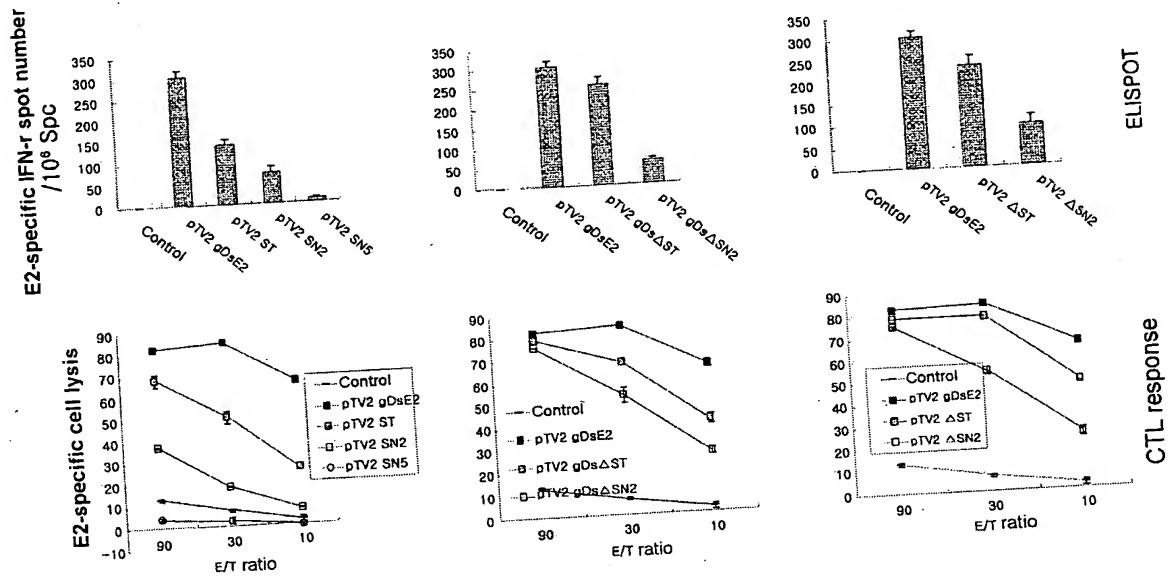
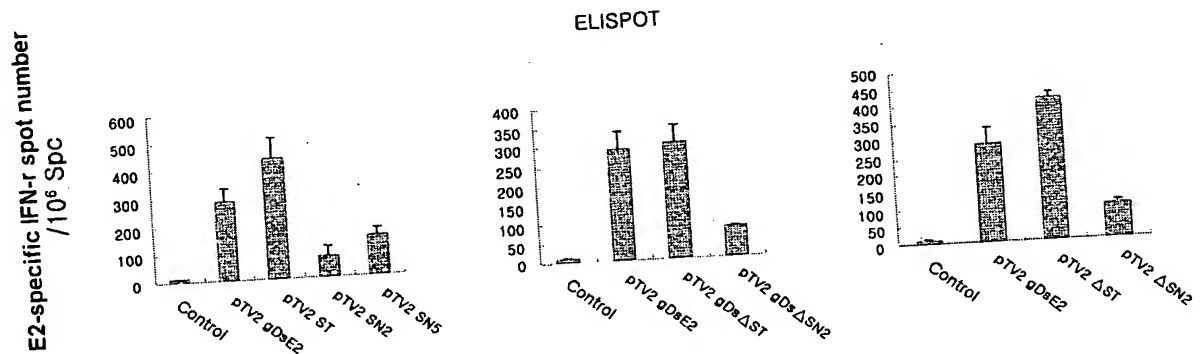


FIG. 10

Optimization of insert size

(3, 4 weeks after boosting)

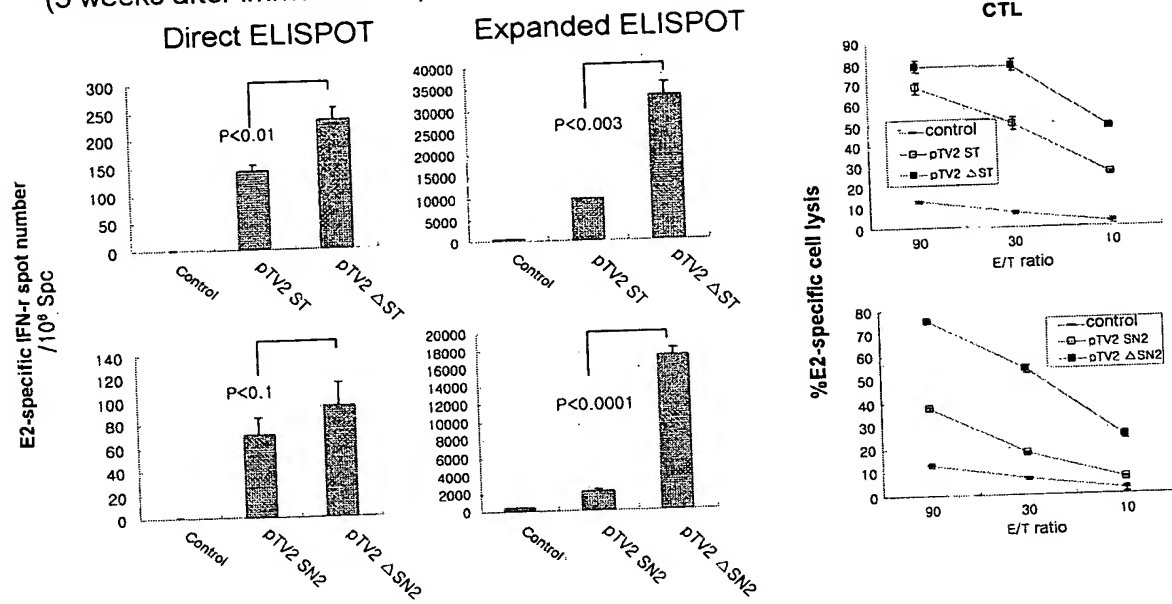
E2 specific IFN- γ ELISPOT & CTL response
target cell : 2×10^4 CT26-hghE2t/well



8/21

FIG. 11

Truncation of core N-terminus
(5 weeks after immunization)



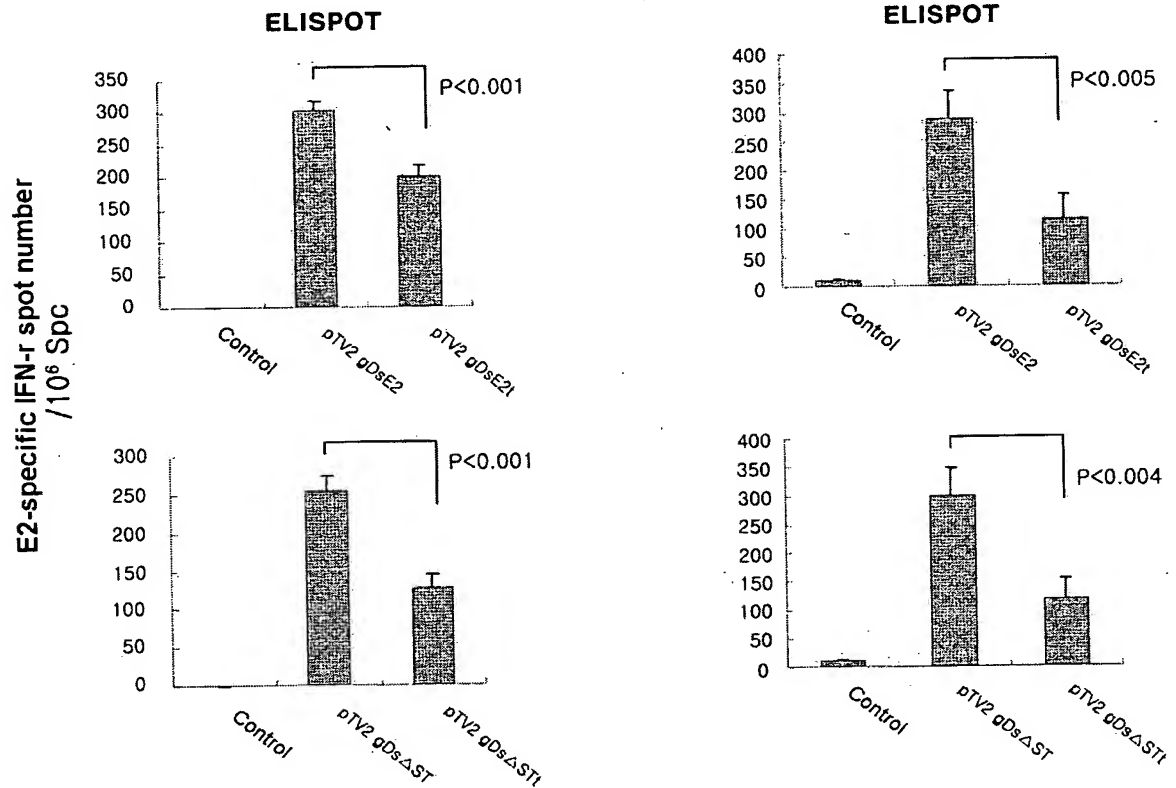
9/21

FIG. 12

Truncation of E2 TM domain

5 weeks after immunization

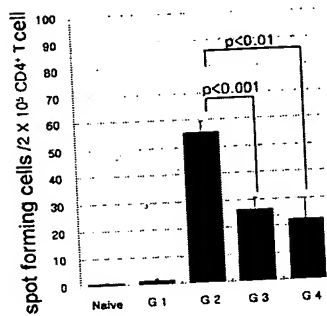
3.4 weeks after boosting



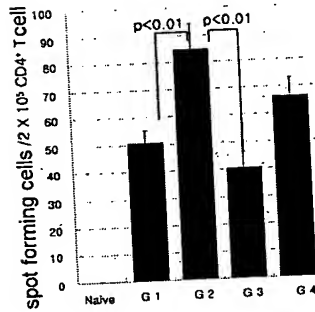
10/21

FIG. 13

a. E2 specific IFN- γ ELISPOT

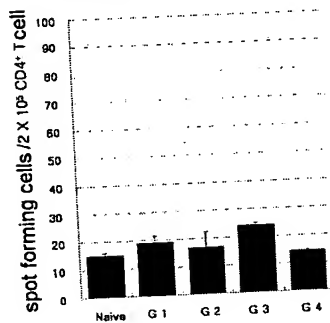


b. core specific IFN- γ ELISPOT

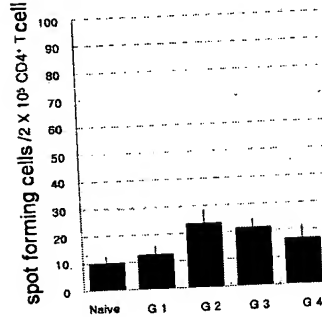


naive :saline injected control
G 1: pGX10 gDsΔST + pGX10
mIL-12mutant injection ->
pGX10 gDsΔST + pGX10
mIL-12mutant injection
G 2: pGX10 gDsΔST + pGX10
mIL-12mutant injection ->
rAd gDsΔST injection
G 3: rAd gDsΔST injection ->
rAd gDsΔST injection
G 4: rAd gDsΔST injection ->
pGX10 gDsΔST + pGX10
mIL-12mutant injection

c. E2specificIL-4 ELISPOT

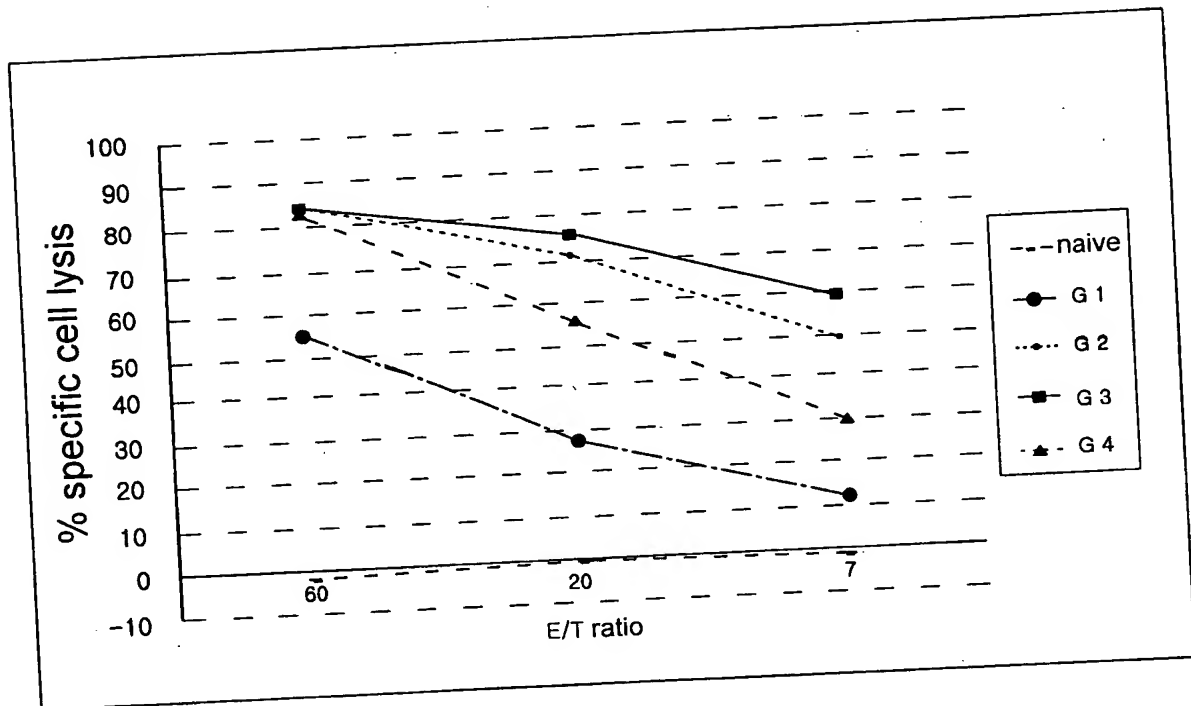


d. core specific IL-4 ELISPOT



11/21

FIG. 14

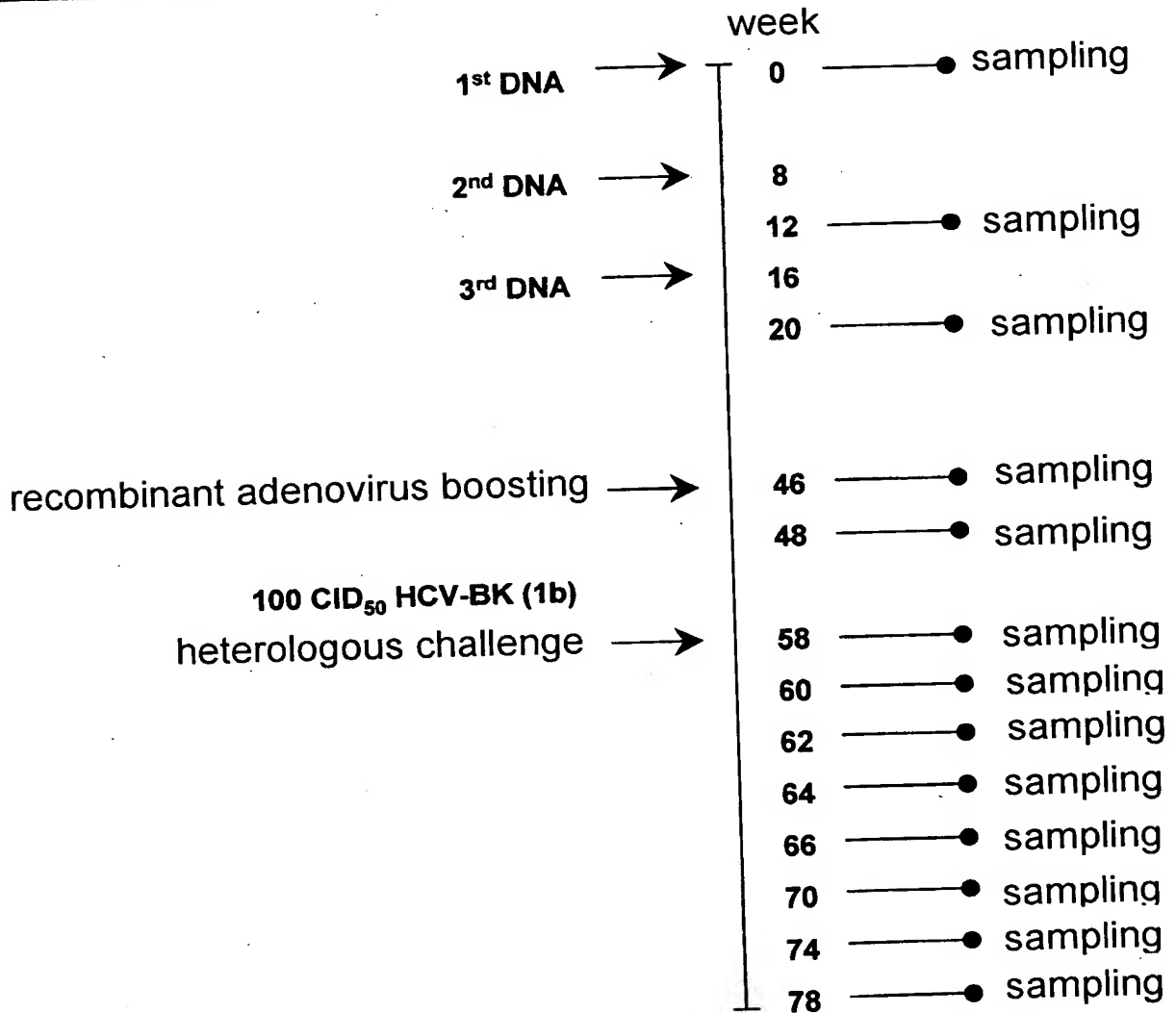


12/21

FIG. 15

(schedule)

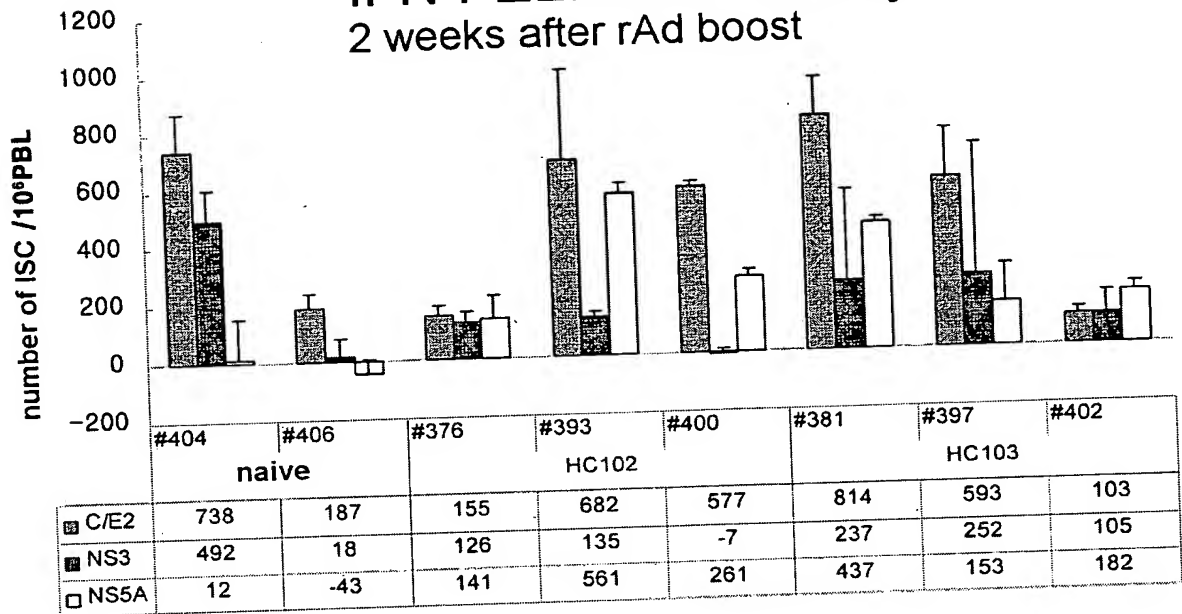
DNA prime/ rAd boost



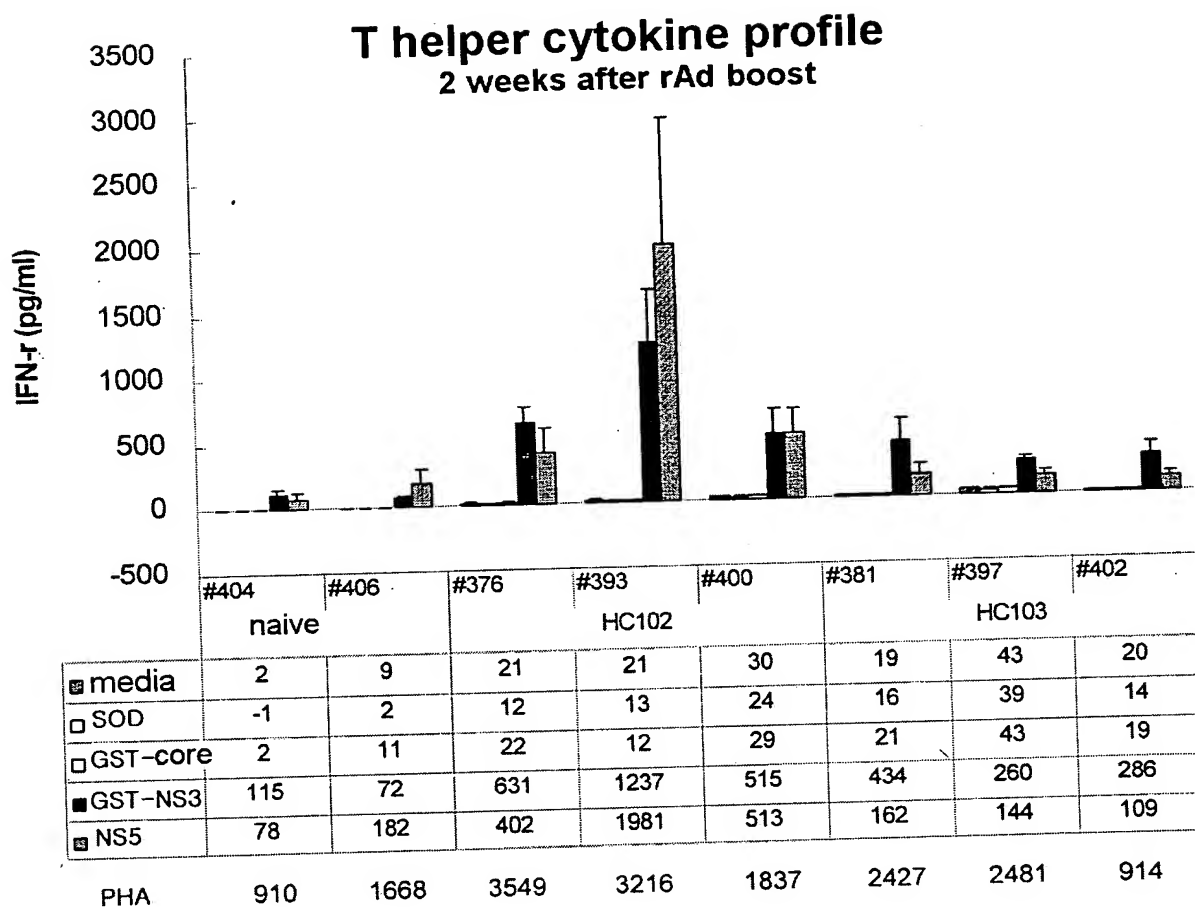
13/21

FIG. 16

IFN-r ELISPOT Assay 2 weeks after rAd boost



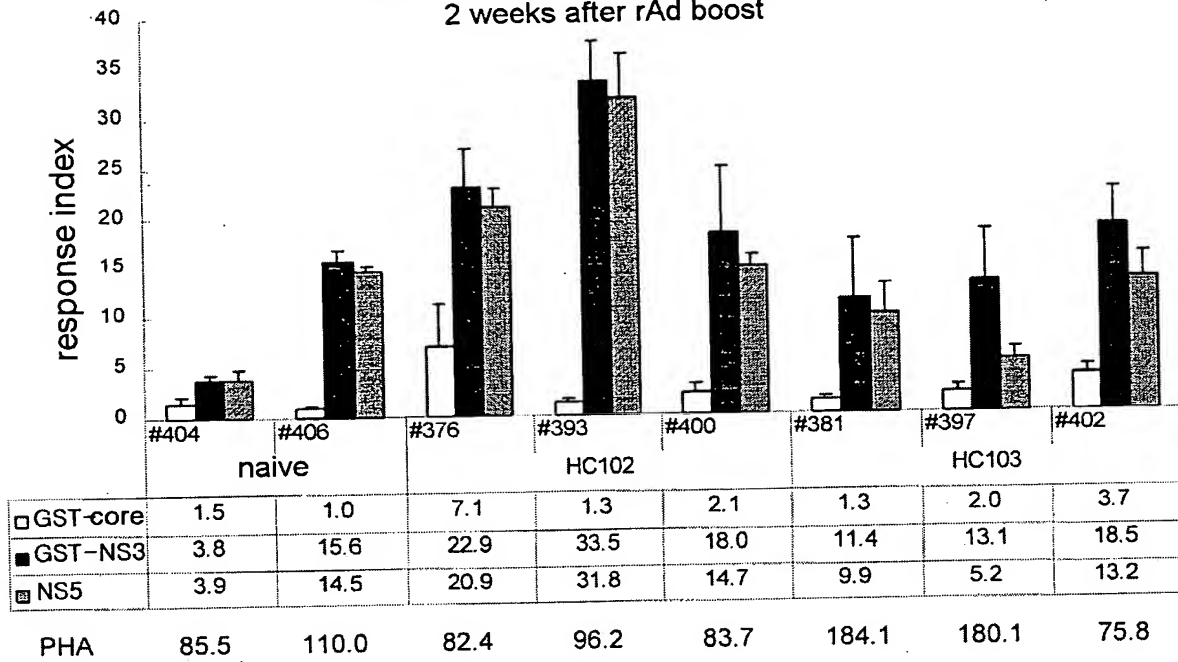
14/21
FIG. 17



15/21

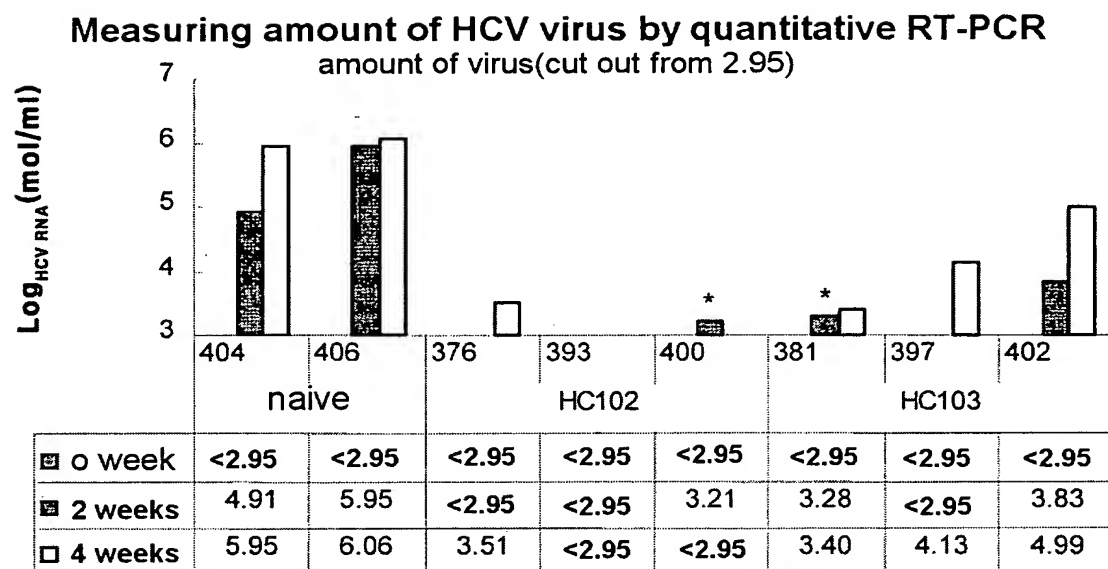
FIG. 18

T cell Proliferative response
2 weeks after rAd boost



16/21

FIG. 19



after challenge

detection limit of HCV RNA is 2.95log₁₀

* mean amount of HCV RNA with triplicate measurement, one of which was below the detection limit.

17/21

FIG. 20a

Amino acid sequence of core peptide pool

Δ Core (43-191)		
No	Name	Sequence
#1	HCV43-62	RLGVRAIRKT SERSQPRGRR
#2	HCV53-72	SERSQPRGRR QPIPKARQPE
#3	HCV63-82	QPIPKARQPE GRTWAQPGYP
#4	HCV73-92	GRTWAQPGYP WPLYGMEGLG
#5	HCV83-102	WPLYGMEGLG WAGWLLSPRG
#6	HCV93-112	WAGWLLSPRG SRPSWGPTDP
#7	HCV103-122	SRPSWGPTDP RRRSRNLGKV
#8	HCV113-132	RRRSRNLGKV IDTLTCGFAD
#9	HCV123-142	IDTLTCGFAD LMGYIPLUGA
#10	HCV133-152	LMGYIPLUGA PLGGVARALA
#11	HCV143-162	PLGGVARALA HGURLLEDGV
#12	HCV153-172	HGURLLEDGV NYATGNLPGC

10/528644

PCT/KR03/01951

RO/KR 19. 11. 2003

18/21

FIG. 20b

Amino acid sequence of E2t peptide pool

E2t (384-713)					
No	Name	Sequence	No	Name	Sequence
#13	HCV384-403	STRVTGGTEG RTTNRFVSI	#29	HCV554-573	WMNSTGFTKT CGGPPCDIGG
#14	HCV404-423	ASGPSQKIQL VMNNGSWHIN	#30	HCV564-583	CGGPPCDIGG UGNTLTLCPT
#15	HCV414-433	VMNNGSWHIN RTALNCNDSL	#31	HCV574-593	UGNTLTLCPT DCIRKPEAT
#16	HCV424-443	RTALNCNDSL SSGFIAALFY	#32	HCV584-603	DCIRKPEAT YTKCGSGPWL
#17	HCV434-453	SSGFIAALFY THKFDSSGCP	#33	HCV594-613	YTKCGSGPWL TPRCHVDYPY
#18	HCV444-463	THKFDSSGCP ERMASCRPID	#34	HCV604-623	TPRCHVDYPY RLWHYPCTIN
#19	HCV454-473	ERMASCRPID KFAQGGG3IT	#35	HCV614-633	RLWHYPCTIN FTIFKRMVY
#20	HCV464-483	KFAQGGG3IT YAESGGSDQR	#36	HCV624-643	FTIFKRMVY GGVEHRLDAA
#21	HCV474-493	YAESGGSDQR PYCWHYAPRQ	#37	HCV634-653	GGVEHRLDAA CNWTRGERCD
#22	HCV484-503	PYCWHYAPRQ CGIUPASQVC	#38	HCV644-663	CNWTRGERCD LEDRDRSELS
#23	HCV494-513	CGIUPASQVC GPVYCITPSP	#39	HCV654-673	LEDRDRSELS PLLSTTEWQ
#24	HCV504-523	GPVYCITPSP UVUGTTDRSG	#40	HCV664-683	PLLSTTEWQ VLPCTTTLP
#25	HCV514-533	UVUGTTDRSG APTYTWGENE	#41	HCV674-693	VLPCTTTLP ALSTGLIHLN
#26	HCV524-543	APTYTWGENE TDULLLNMTN	#42	HCV684-703	ALSTGLIHLN QNIUHAQHLN
#27	HCV534-553	TDULLLNMTN PPQANWFGCT	#43	HCV694-713	QNIUHAQHLN GUGSAUVSIV
#28	HCV544-563	PPQANWFGCT WMNSTGFTKT			

19/21

FIG. 20c

Amino acid sequence of NS3 protease peptide pool

NS3 protease (1029-1217)		
#44	gHCV-1029	ITAYSQQTRGLLGCIITSLT
#45	gHCV-1039	LLGCIITSLTGRDKMQVEGE
#46	gHCV-1069	FLATCUMGAWTVFHGAGSK
#47	gHCV-1078	WTVFHGAGSKTLAGPKGPIT
#48	gHCV-1088	TLAGPKGPITQMYTNVDL
#49	gHCV-1098	QMYTNVDLVLVGWQAPPGSR
#50	gHCV-1108	VGWQAPPGSRPLTPCTCGSS
#51	gHCV-1118	PLTPCTCGSSDLVLVTRHAD
#52	gHCV-1128	DLVLVTRHADVIPVRRGDS
#53	gHCV-1138	VIPVRRGDSRGSLPCPRPV
#54	gHCV-1148	RGSLPCPRPVSYLKGSSGGP
#55	gHCV-1158	SYLKGSSGGPLLCPSGHAUG
#56	gHCV-1168	LLCPSGHAUGIFRAAVCTRG
#57	gHCV-1178	IFRAAVCTRGVAKAVDFIPV
#58	gHCV-1188	VAKAVDFIPVESMETTMRSP
#59	gHCV-1198	ESMETTMRSPVITDNSTPPA

20/21

FIG. 20d

Amino acid sequence of Helicase peptide pool

NS3 helicase (1208-1656)					
No	Name	Sequence	No	Name	Sequence
#60	HCV1208-1227	VITDNSTPPA VPQTFQVAHL	#77	HCV1458-1477	TQTUDFSLDP TFT IDTTTUP
#61	HCV1218-1237	VPQTFQVAHL HAPTGSCKST	#78	HCV1468-1487	TFT IDTTTUP QDAUSRSQRR
#62	HCV1228-1247	HAPTGSCKST KUPAAYAAQG	#79	HCV1478-1497	QDAUSRSQRR GRTGRGRRGI
#63	HCV1238-1257	KUPAAYAAQG YKULULMPSV	#80	HCV1488-1507	GRTGRGRRGI YRFVTPGERP
#64	HCV1248-1267	YKULULMPSV AATLGFGVYM	#81	HCV1498-1517	YRFVTPGERP SGHFDSSULC
#65	HCV1258-1277	AATLGFGVYM SKANGIDPNI	#82	HCV1518-1537	ECYDAGCAWY ELTPAETSUR
#66	HCV1268-1287	SKANGIDPNI RTGURAITTG	#83	HCV1528-1547	ELTPAETSUR LRAYLNTPLG
#67	HCV1278-1297	RTGURAITTG APITYSTYCK	#84	HCV1538-1557	LRAYLNTPLG PUCQDHLFW
#68	HCV1318-1337	HSTDSTSLG IGTULDQAEI	#85	HCV1548-1567	PUCQDHLFW ESUITGLTHI
#69	HCV1328-1347	IGTULDQAEI AGARLVULAT	#86	HCV1558-1577	ESUITGLTHI DAHFLSQTQK
#70	HCV1348-1367	ATPPGSUTUP HPNIEEVALS	#87	HCV1568-1587	DAHFLSQTQK AGDNFPYLVA
#71	HCV1358-1377	HPNIEEVALS HTGEIPFYCK	#88	HCV1578-1597	AGDNFPYLVA YQATUCARAQ
#72	HCV1368-1387	HTGEIPFYCK AIPIEVIKGG	#89	HCV1588-1607	YQATUCARAQ APPPSWDQMW
#73	HCV1388-1407	RHLIFCHSEK KSDELAACKS	#90	HCV1598-1617	APPPSWDQMW KCLTRLKPTL
#74	HCV1398-1417	KSDELAACKS ALGLNAUAYY	#91	HCV1608-1627	KCLTRLKPTL HGPTPLLTRL
#75	HCV1408-1427	ALGLNAUAYY RGLDUSVIPT	#92	HCV1618-1637	HGPTPLLTRL GAUQNEUTLT
#76	HCV1418-1437	RGLDUSVIPT SGDUUUUATD	#93	HCV1628-1647	GAUQNEUTLT HPUTKFIHAC

21/21

FIG. 20e

Amino acid sequence of NS5A peptide pool

NS5A (1972-2411)					
No	Name	Sequence	No	Name	Sequence
#94	gHCV-1972	SGSULRDVMDWICTULTDFK	#113	gHCV-2192	GSPPSLASSASQLSAPSLK
#95	gHCV-1982	WICTULTDFKTWLSKLLPR	#114	gHCV-2202	ASQLSAPSLKATCT IHMDSP
#96	gHCV-1992	TWLSKLLPRLPGUPFFSCQ	#115	gHCV-2212	ATCT IHMDSPDADL IEAMLL
#97	gHCV-2002	LPGUPFFSCQRGYKGVWRGE	#116	gHCV-2222	DADL IEAMLLWRQEMGGNIT
#98	gHCV-2012	RGYKGVWRGEGIMQTTCPCG	#117	gHCV-2232	WRQEMGGNITRVESENKVV I
#99	gHCV-2022	GIMQTTCPGGAQ IAGHVKNK	#118	gHCV-2242	RVESENKVVILDSIEP IRAE
#100	gHCV-2042	SMRIUGPRTCSNTWNGTFPI	#119	gHCV-2252	LDSIEP IRAEEDEREVSUPA
#101	gHCV-2052	SNTWNGTFPIINAYTTGPCSP	#120	gHCV-2262	EDEREVSUPAE ILRRSRKFP
#102	gHCV-2062	NAYTTGPCSPSPAPNYSRAL	#121	gHCV-2272	E ILRRSRKFPAMP IWAPD
#103	gHCV-2072	SPAPNYSRALWRVAAEEYVE	#122	gHCV-2292	YMPPLLESWEKDPDYOPPUH
#104	gHCV-2082	WRVAAEEYVEUTRUGDFHYV	#123	gHCV-2302	DPDYOPPUHGCPLPPTKAA
#105	gHCV-2092	UTRUGDFHYVGTGUTTDNVKC	#124	gHCV-2322	PIPPPRRKRT IULTTESTVSS
#106	gHCV-2102	TGUTTDNVKCPQCUPAPEFF	#125	gHCV-2332	IULTTESTVSSALAEATKTF
#107	gHCV-2122	TELDGURLHRYAPACKPLLR	#126	gHCV-2342	ALAEATKTFGGSGSWAADS
#108	gHCV-2132	YAPACKPLLRDEVSFQUGLN	#127	gHCV-2352	GGSGSWAADSGTATAPPDQT
#109	gHCV-2152	QYLVGSQLPCEPEPDVAULT	#128	gHCV-2372	SDDGDKESDVESYSSMPPLE
#110	gHCV-2162	EPEPDVAULTSMLTDP SHIT	#129	gHCV-2382	ESYSSMPPLEGEPCGDPDLSD
#111	gHCV-2172	SMLTDP SHIT AETAKRRLAR	#130	gHCV-2392	GEPCGDPDLSDGSWSTVSEEA
#112	gHCV-2182	AETAKRRLARGSPPSLASSS			

**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ BLACK BORDERS
- ☐ IMAGE CUT OFF AT TOP, BOTTOM OR SIDES
- ☐ FADED TEXT OR DRAWING
- ☒ BLURRED OR ILLEGIBLE TEXT OR DRAWING
- ☐ SKEWED/SLANTED IMAGES
- ☐ COLOR OR BLACK AND WHITE PHOTOGRAPHS
- ☐ GRAY SCALE DOCUMENTS
- ☐ LINES OR MARKS ON ORIGINAL DOCUMENT
- ☐ REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY
- ☐ OTHER: _____

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.